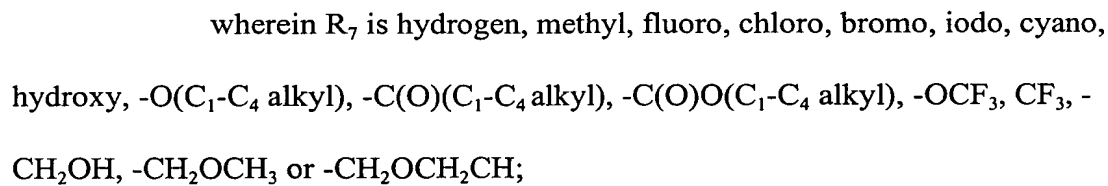


**Claim 1 (currently amended)** A compound of the formula



2

R<sub>19</sub> is methyl or ethyl;

R<sub>5</sub> is phenyl or pyridyl and R<sub>5</sub> is substituted by two or three substituents independently selected from C<sub>1</sub>-C<sub>4</sub> alkyl, chloro and bromo, except that no more than one such substituent can be bromo;

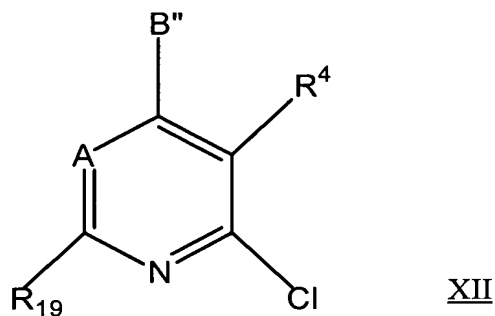
R<sub>4</sub> is hydrogen, C<sub>1</sub>-C<sub>4</sub> hydrocarbyl, fluoro, chloro, bromo, iodo, C<sub>1</sub>-C<sub>4</sub> alkoxy, trifluoromethoxy, -CH<sub>2</sub>OCH<sub>3</sub>, -CH<sub>2</sub>OCH<sub>2</sub>CH<sub>3</sub>, -CH<sub>2</sub>CH<sub>2</sub>OCH<sub>3</sub>, ~~-CH<sub>2</sub>OF<sub>3</sub> =~~  
CH<sub>2</sub>OCF<sub>3</sub>, CF<sub>3</sub>, amino, nitro, -NH(C<sub>1</sub>-C<sub>4</sub> alkyl), -N(CH<sub>3</sub>)<sub>2</sub>, -NHCOCH<sub>3</sub>, -  
NHCONHCH<sub>3</sub>, -SO<sub>n</sub>(C<sub>1</sub>-C<sub>4</sub> alkyl) where n is 0, 1 or 2, cyano, hydroxy, -CO(C<sub>1</sub>-C<sub>4</sub>  
alkyl), -CHO, ~~cyano~~ or -COO(C<sub>1</sub>-C<sub>4</sub> alkyl) wherein said C<sub>1</sub>-C<sub>4</sub> hydrocarbyl may  
optionally contain one double or triple bond and may optionally be substituted with  
one substituent selected from hydroxy, amino, -NHCOCH<sub>3</sub>, -NH(C<sub>1</sub>-C<sub>2</sub> alkyl), -N(C<sub>1</sub>-  
C<sub>2</sub> alkyl)<sub>2</sub>, -COO(C<sub>1</sub>-C<sub>4</sub> alkyl), -CO(C<sub>1</sub>-C<sub>4</sub> alkyl), C<sub>1</sub>-C<sub>3</sub> alkoxy, C<sub>1</sub>-C<sub>3</sub> thioalkyl,  
fluoro, chloro, cyano and nitro;

A is N, CH or CCH<sub>3</sub>;

and Z is O, NH, N(CH<sub>3</sub>), S or CH<sub>2</sub>, with the proviso that when A is CH  
or CCH<sub>3</sub>, then Z must be O or S.

Claim 2 (previously presented) A compound according to claim 1 having the formula  
XI wherein R<sub>7</sub> is hydrogen or methyl and R<sub>4</sub> is hydrogen, , C<sub>1</sub>-C<sub>4</sub> hydrocarbyl, -O(C<sub>1</sub>-  
C<sub>4</sub> alkyl), chloro or cyano.

Claim 3 (currently amended) A compound of the formula



wherein R<sub>19</sub> is methyl or ethyl;

R<sub>4</sub> is hydrogen, C<sub>1</sub>-C<sub>4</sub> hydrocarbyl, fluoro, chloro, bromo, iodo, C<sub>1</sub>-C<sub>4</sub> alkoxy, trifluoromethoxy, -CH<sub>2</sub>OCH<sub>3</sub>, -CH<sub>2</sub>OCH<sub>2</sub>CH<sub>3</sub>, ~~-CH<sub>2</sub>CH<sub>2</sub>OCH<sub>3</sub>~~, ~~-CH<sub>2</sub>OCF<sub>3</sub>~~, -CH<sub>2</sub>OCF<sub>3</sub>, CF<sub>3</sub>, amino, nitro, -NH(C<sub>1</sub>-C<sub>4</sub> alkyl), -N(CH<sub>3</sub>)<sub>2</sub>, -NHCOCH<sub>3</sub>, -NHCONHCH<sub>3</sub>, -SO<sub>n</sub>(C<sub>1</sub>-C<sub>4</sub> alkyl) where n is 0, 1 or 2, cyano, hydroxy, -CO(C<sub>1</sub>-C<sub>4</sub> alkyl), -CHO, ~~-COOH~~ ~~cyano~~ or -COO(C<sub>1</sub>-C<sub>4</sub> alkyl) wherein said C<sub>1</sub>-C<sub>4</sub> hydrocarbyl may optionally contain one double or triple bond and may optionally be substituted with one substituent selected from hydroxy, amino, -NHCOCH<sub>3</sub>, -NH(C<sub>1</sub>-C<sub>2</sub> alkyl), -N(C<sub>1</sub>-C<sub>2</sub> alkyl)<sub>2</sub>, -COO(C<sub>1</sub>-C<sub>4</sub> alkyl), -CO(C<sub>1</sub>-C<sub>4</sub> alkyl), C<sub>1</sub>-C<sub>3</sub> alkoxy, C<sub>1</sub>-C<sub>3</sub> thioalkyl, fluoro, chloro, cyano and nitro;

A is N, CH or CCH<sub>3</sub>

B" is -NR<sub>1</sub>R<sub>2</sub>, -CR<sub>1</sub>R<sub>2</sub>R<sub>11</sub>, -C(=CR<sub>2</sub>R<sub>12</sub>)R<sub>1</sub>, -NHCHR<sub>1</sub>R<sub>2</sub>, -OCHR<sub>1</sub>R<sub>2</sub>, -SCHR<sub>1</sub>R<sub>2</sub>, -CHR<sub>2</sub>OR<sub>12</sub>, -CHR<sub>2</sub>SR<sub>12</sub>, -C(S)R<sub>2</sub> or -C(O)R<sub>2</sub> or cyano;  
wherein R<sub>1</sub> is C(O)H, C(O)(C<sub>1</sub>-C<sub>6</sub> ~~alkyl~~ hydrocarbyl), C(O)(C<sub>1</sub>-C<sub>6</sub> alkylene) (C<sub>3</sub>-C<sub>8</sub> ~~cycloalkyl~~ cyclohydrocarbyl), C(O)(C<sub>3</sub>-C<sub>8</sub> cycloalkylene) (C<sub>3</sub>-C<sub>8</sub> ~~cycloalkyl~~ cyclohydrocarbyl), C(O)(C<sub>1</sub>-C<sub>6</sub> alkylene) (C<sub>4</sub>-C<sub>8</sub> ~~heterocycloalkyl~~ heterocyclohydrocarbyl), -C(O)(C<sub>3</sub>-C<sub>8</sub> cycloalkylene) (C<sub>4</sub>-C<sub>8</sub> ~~heterocycloalkyl~~ heterocyclohydrocarbyl), C<sub>1</sub>-C<sub>6</sub> ~~alkyl~~ hydrocarbyl, C<sub>3</sub>-C<sub>8</sub> ~~cycloalkyl~~ cyclohydrocarbyl, C<sub>4</sub>-C<sub>8</sub> ~~heterocycloalkyl~~ heterocyclohydrocarbyl, -(C<sub>1</sub>-C<sub>6</sub> alkylene) (C<sub>3</sub>-C<sub>8</sub> ~~cycloalkyl~~ cyclohydrocarbyl), -(C<sub>3</sub>-C<sub>8</sub> cycloalkylene) (C<sub>3</sub>-C<sub>8</sub> ~~cycloalkyl~~ cyclohydrocarbyl), -(C<sub>1</sub>-C<sub>6</sub> alkylene) (C<sub>4</sub>-C<sub>8</sub> ~~heterocycloalkyl~~ heterocyclohydrocarbyl), -(C<sub>3</sub>-C<sub>8</sub>

cycloalkylene) (C<sub>4</sub>-C<sub>8</sub> ~~heterocycloalkyl~~ heterocyclohydrocarbyl), or -O-aryl, or -O-(C<sub>1</sub>-C<sub>6</sub> alkylene)-aryl; wherein said aryl, C<sub>4</sub>-C<sub>8</sub> ~~heterocycloalkyl~~ heterocyclohydrocarbyl, C<sub>1</sub>-C<sub>6</sub> ~~alkyl~~ hydrocarbyl, C<sub>3</sub>-C<sub>8</sub> ~~cycloalkyl~~ cyclohydrocarbyl, C<sub>3</sub>-C<sub>8</sub> cycloalkylene, and C<sub>1</sub>-C<sub>6</sub> alkylene groups may each independently be optionally substituted with from one to six fluoro and may each independently be optionally substituted with one or two substituents R<sub>8</sub> independently selected from the group consisting of C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl, -C<sub>3</sub>-C<sub>8</sub> cycloalkyl, hydroxy, fluoro, chloro, bromo, iodo, CF<sub>3</sub>, -O-(C<sub>1</sub>-C<sub>6</sub> ~~alkyl~~ hydrocarbyl), -O-(C<sub>3</sub>-C<sub>5</sub> cycloalkyl), -O-CO-(C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl), -O-CO-NH(C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl), -O-CO-N(R<sub>24</sub>)(R<sub>25</sub>), -N(R<sub>24</sub>)(R<sub>25</sub>), -S(C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl), -S(C<sub>3</sub>-C<sub>5</sub> cycloalkyl), -N(C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl)CO(C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl), -NHCO(C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl), -COO(C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl), -CONH(C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl), -CON(C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl) (C<sub>1</sub>-C<sub>2</sub> ~~alkyl~~ hydrocarbyl), CN, NO<sub>2</sub>, -OSO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl), S<sup>+</sup>(C<sub>1</sub>-C<sub>6</sub> ~~alkyl~~ hydrocarbyl) (C<sub>1</sub>-C<sub>2</sub> alkyl) I<sup>-</sup>, -SO(C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl) and -SO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl); and wherein the C<sub>1</sub>-C<sub>6</sub> ~~alkyl~~ hydrocarbyl, C<sub>1</sub>-C<sub>6</sub> alkylene, C<sub>3</sub>-C<sub>8</sub> ~~cycloalkyl~~ cyclohydrocarbyl, C<sub>3</sub>-C<sub>8</sub> cycloalkylene, and C<sub>4</sub>-C<sub>8</sub> ~~heterocycloalkyl~~ heterocyclohydrocarbyl moieties of R<sub>1</sub> may optionally independently contain from one to three double or triple bonds; and wherein the C<sub>1</sub>-C<sub>4</sub> ~~alkyl~~ hydrocarbyl moieties and the C<sub>1</sub>-C<sub>6</sub> ~~alkyl~~ hydrocarbyl moieties of R<sub>8</sub> can optionally independently be substituted with hydroxy, C<sub>1</sub>-C<sub>4</sub> alkyl, amino, aryl, -CH<sub>2</sub>-aryl, -C<sub>3</sub>-C<sub>5</sub> cycloalkyl, or -O-(C<sub>1</sub>-C<sub>4</sub> alkyl), and can optionally independently be substituted with from one to five fluoro, and can optionally contain one or two double or triple bonds; and wherein each ~~heterocycloalkyl~~ heterocyclohydrocarbyl group of

R<sub>1</sub> contains from one to three heteromoieties selected from oxygen, S(O)<sub>m</sub>, nitrogen and NR<sub>12</sub>:

wherein R<sub>2</sub> is hydrogen, C<sub>1</sub>-C<sub>12</sub> ~~alkyl~~ hydrocarbyl, C<sub>3</sub>-C<sub>8</sub> ~~cycloalkyl~~ cyclohydrocarbyl, C<sub>4</sub>-C<sub>8</sub> ~~heterocycloalkyl~~ heterocyclohydrocarbyl, -(C<sub>1</sub>-C<sub>6</sub> alkylene) (~~C<sub>3</sub>-C<sub>8</sub> cycloalkyl~~ cyclohydrocarbyl), -(C<sub>3</sub>-C<sub>8</sub> cycloalkylene) (C<sub>3</sub>-C<sub>8</sub> ~~cycloalkyl~~ cyclohydrocarbyl), -(C<sub>1</sub>-C<sub>6</sub> alkylene) (C<sub>4</sub>-C<sub>8</sub> ~~heterocycloalkyl~~ heterocyclohydrocarbyl), -(C<sub>3</sub>-C<sub>8</sub> cycloalkylene) (C<sub>4</sub>-C<sub>8</sub> ~~heterocycloalkyl~~ heterocyclohydrocarbyl), aryl, -(C<sub>1</sub>-C<sub>6</sub> alkylene) aryl, or-(C<sub>3</sub>-C<sub>8</sub> cycloalkylene) (aryl); wherein each of the foregoing R<sub>2</sub> groups may optionally be substituted with from one three substituents independently selected from chloro, fluoro, and C<sub>1</sub>-C<sub>6</sub> alkyl, wherein one of said one to three substituents can further be selected from bromo, iodo, C<sub>1</sub>-C<sub>6</sub> alkoxy, -OH, -O-CO-(C<sub>1</sub>-C<sub>6</sub> alkyl), -O-CO-N(C<sub>1</sub>-C<sub>4</sub> alkyl) (C<sub>1</sub>-C<sub>2</sub> alkyl), -S(C<sub>1</sub>-C<sub>6</sub> alkyl), -S(O)(C<sub>1</sub>-C<sub>6</sub> alkyl), -S(O)<sub>2</sub>(C<sub>1</sub>-C<sub>6</sub> alkyl), S<sup>+</sup>(C<sub>1</sub>-C<sub>6</sub> alkyl)(C<sub>1</sub>-C<sub>2</sub> alkyl)I<sup>-</sup>, CN, and NO<sub>2</sub>; and wherein the C<sub>1</sub>-C<sub>12</sub> ~~alkyl~~ hydrocarbyl, -(C<sub>1</sub>-C<sub>6</sub> alkylene), (~~C<sub>3</sub>-C<sub>8</sub> cycloalkyl~~ cyclohydrocarbyl), (~~C<sub>3</sub>-C<sub>8</sub> cycloalkylene~~), and(~~C<sub>4</sub>-C<sub>8</sub> heterocycloalkyl~~ heterocyclohydrocarbyl) moieties of R<sub>2</sub> may optionally independently contain from one to three double or triple bonds; and wherein each ~~heterocycloalkyl~~ heterocyclohydrocarbyl group of R<sub>2</sub> contains from one to three heteromoieties selected from oxygen, S(O)<sub>m</sub>, nitrogen, and NR<sub>12</sub>;

or where R<sub>1</sub> and R<sub>2</sub> are as in -NHCHR<sub>1</sub>R<sub>2</sub>, -OCHR<sub>1</sub>R<sub>2</sub>, -SCHR<sub>1</sub>R<sub>2</sub>, -CHR<sub>1</sub>R<sub>2</sub>, or -NR<sub>1</sub>R<sub>2</sub>, R<sub>1</sub> and R<sub>2</sub> of B may form a saturated 5- to 8-membered ring which may optionally contain one or two double bonds and in which one or two of the ring carbons may optionally be replaced by an oxygen, S(O)<sub>m</sub>, nitrogen or NR<sub>12</sub>; and which

carbocyclic ring can optionally be substituted with from 1 to 3 substituents selected from the group consisting of hydroxy, C<sub>1</sub>-C<sub>4</sub> alkyl, fluoro, chloro, bromo, iodo, CF<sub>3</sub>, -O-(C<sub>1</sub>-C<sub>4</sub> alkyl), -O-CO-(C<sub>1</sub>-C<sub>4</sub> alkyl), -O-CO-NH(C<sub>1</sub>-C<sub>4</sub> alkyl), -O-CO-N(C<sub>1</sub>-C<sub>4</sub> alkyl) (C<sub>1</sub>-C<sub>2</sub> alkyl), -NH(C<sub>1</sub>-C<sub>4</sub> alkyl), -N(C<sub>1</sub>-C<sub>2</sub> alkyl)(C<sub>1</sub>-C<sub>4</sub> alkyl), -S(C<sub>1</sub>-C<sub>4</sub> alkyl), -N(C<sub>1</sub>-C<sub>4</sub> alkyl) CO(C<sub>1</sub>-C<sub>4</sub> alkyl), -NHCO(C<sub>1</sub>-C<sub>4</sub> alkyl), -COO(C<sub>1</sub>-C<sub>4</sub> alkyl), -CONH(C<sub>1</sub>-C<sub>4</sub> alkyl), -CON(C<sub>1</sub>-C<sub>4</sub> alkyl)(C<sub>1</sub>-C<sub>2</sub> alkyl), CN, NO<sub>2</sub>, -OSO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub> alkyl), -SO(C<sub>1</sub>-C<sub>4</sub> alkyl), -SO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub> alkyl), wherein one of said one to three substituents can further be selected from phenyl;

wherein each N is independently zero, one or two;

wherein R<sub>11</sub> is hydrogen, hydroxy, fluoro, ethoxy, or methoxy;

wherein R<sub>12</sub> is hydrogen or C<sub>1</sub>-C<sub>4</sub> alkyl;

with the proviso that when A is N then B" and R<sub>4</sub> are defined,

respectively, as B" and R<sub>4</sub> are defined above and when A is CH or

CCH<sub>3</sub>, then B" is -NR<sub>1</sub>R<sub>2</sub>, -NHCHR<sub>1</sub>R<sub>2</sub>, -OCHR<sub>1</sub>R<sub>2</sub> or cyano and R<sub>4</sub> is

an electron deficient group.

Claim 4 (previously presented) A compound according to claim 3, wherein B" is -NR<sub>1</sub>R<sub>2</sub>, -NHCHR<sub>1</sub>R<sub>2</sub>, and A is CH or CCH<sub>3</sub>.

Claims 5-8 (cancelled)

Claim 9 (previously presented) A compound according to claim 3 wherein the electron deficient group is selected from the group consisting of NO<sub>2</sub>, -COO(C<sub>1</sub>-C<sub>4</sub>

alkyl),  $-\text{C}(=\text{O})\text{CH}_3$ ,  $-\text{COOH}$  and cyano.

Claim 10 (previously presented) 4-Chloro-2-(4-chloro-2,6-dimethyl-phenoxy)-3,6-dimethyl-pyridine.

Claim 11 (new). The compound according to claim 1, wherein the compound has the formula X and Z is O, NH, S or  $\text{CH}_2$ .

Claim 12 (new). The compound according to claim 1, wherein the compound has the formula XI.

Claim 13 (new) The compound according to claim 1, wherein the compound has the formula IV.

Claim 14 (new/withdrawn). A process for preparing a compound of formula I shown below or a pharmaceutically acceptable salt thereof comprising:

(a) providing the compound of claim 3;

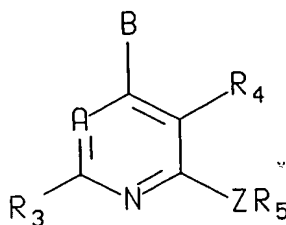
(b) providing a compound of formula  $\text{R}_5\text{ZH}$ , wherein

$\text{R}_5$  is phenyl or pyridyl, and  $\text{R}_5$  is substituted with from one to three

substituents independently selected from fluoro, chloro, C<sub>1</sub>-C<sub>6</sub> alkyl, and C<sub>1</sub>-C<sub>6</sub> alkoxy, or with one substituent selected from hydroxy, iodo, bromo, formyl, cyano, nitro, trifluoromethyl, amino, -(C<sub>1</sub>-C<sub>6</sub> alkyl)O(C<sub>1</sub>-C<sub>6</sub>)alkyl, -NHCH<sub>3</sub>, -N(CH<sub>3</sub>)<sub>2</sub>, -COOH, -COO(C<sub>1</sub>-C<sub>4</sub> alkyl), -CO(C<sub>1</sub>-C<sub>4</sub> alkyl), -SO<sub>2</sub>NH(C<sub>1</sub>-C<sub>4</sub> alkyl), -SO<sub>2</sub>N(C<sub>1</sub>-C<sub>4</sub> alkyl)(C<sub>1</sub>-C<sub>2</sub> alkyl), -SO<sub>2</sub>NH<sub>2</sub>, -NHSO<sub>2</sub>(C<sub>1</sub>-C<sub>4</sub> alkyl), -S(C<sub>1</sub>-C<sub>6</sub> alkyl) and -SO<sub>2</sub>(C<sub>1</sub>-C<sub>6</sub> alkyl), and wherein the C<sub>1</sub>-C<sub>4</sub> alkyl and C<sub>1</sub>-C<sub>6</sub> alkyl moieties of the foregoing R<sub>5</sub> groups may optionally be substituted with one or two fluoro groups or with one substituent selected from hydroxy, amino, methylamino, dimethylamino and acetyl; and;

Z is NH, O, S, -N(C<sub>1</sub>-C<sub>2</sub> alkyl) or -C(R<sub>13</sub> and R<sub>14</sub>), wherein R<sub>13</sub> and R<sub>14</sub> are each, independently, hydrogen, trifluoromethyl or methyl, or one of R<sub>13</sub> and R<sub>14</sub> is cyano and the other is hydrogen or methyl;

(b) reacting the compound of claim 3 with the compound of the formula R<sub>5</sub>ZH to form the compound of formula I:



I

wherein B is the same as B", and R<sub>3</sub> is methyl, ethyl, fluoro, chloro, bromo, iodo, cyano, methoxy, OCF<sub>3</sub>, methylthio, methylsulfonyl, CH<sub>2</sub>OH, or CH<sub>2</sub>OCH<sub>3</sub> and R<sub>4</sub>, R<sub>5</sub>, Z and A are as described above or in claim 3; and



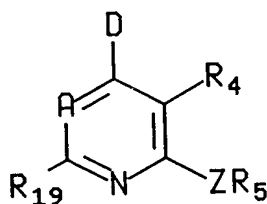
(c) optionally converting the compound of formula I into a pharmaceutically acceptable salt.

Claim 15 (new/withdrawn). The process of claim 14, wherein  $R_4$  is nitro.

Claim 16 (new/withdrawn). A process for preparing a compound of formula IV shown below comprising:

(a) providing the compound of claim 1, wherein the compound has the formula X and D is chloro; and

(b) reacting the compound of claim 1 with phosphorus trichloride to form the compound of formula IV:



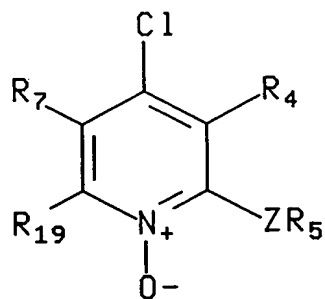
IV

wherein  $R_4$ ,  $R_5$ ,  $R_{19}$ , Z, A and D are as described above or in claim 1.

Claim 17 (new/withdrawn). A process for preparing a compound of formula X shown below comprising:

(a) providing the compound of claim 12; and

(b) reacting the compound of claim 12 with a compound of the formula  $R_5OH$  or  $R_5SH$  in the presence of a base to form the compound of formula X:



X

wherein Z is O, S or CH<sub>2</sub>, and R<sub>4</sub>, R<sub>5</sub>, R<sub>7</sub> and R<sub>19</sub> are as described above or in claim 12.